

LISTING OF THE CLAIMS

1. (Amended) An evaporation system comprising an evaporator ~~(1)~~ heated by process waste steam and a process stage heated by product vapors of the evaporator, in particular at least one further evaporator ~~(3, 5)~~, ~~characterized in that~~ wherein a vapor compression stage ~~(67)~~ is connected to the product vapor exit of the evaporator ~~(1)~~, which compression stage lowers the dew point of the evaporator ~~(1)~~ below the temperature value required for heating the process stage ~~(3, 5)~~ and, by compression of the product vapor, raises it to the temperature value required for heating the process stage ~~(3, 5)~~.

2. (Amended) The evaporation system as claimed in claim 1, ~~characterized in that~~ wherein the process waste steam is saturated process steam.

3. (Amended) The evaporation system as claimed in claim 2, ~~characterized in that~~ wherein the saturated process steam is generated without condensation from superheated process waste steam by supplying water or condensate.

4. (Amended) The evaporation system as claimed in claim 3, ~~characterized in that~~ wherein for the condensation-free conversion of the superheated process waste steam into saturated and purified process steam, a wet washer ~~(33)~~ which purifies the superheated process waste steam is provided.

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5. (Amended) The evaporation system as claimed in claim 4, ~~characterized in that~~wherein a delivery pump ~~(5)~~, in particular in the form of a fan, is arranged at a point in the process steam route from the drier, via the wet washer ~~(33)~~, the heating space of the evaporator (1), a waste steam line ~~(55)~~ and a waste steam chimney ~~(57)~~.

6. (Amended) The evaporation system as claimed in claim 4 ~~or 5~~, ~~characterized in that~~wherein condensate from at least one of the evaporators ~~(1, 3, 5)~~ can be fed to the wet washer ~~(33)~~ for the saturation and purification of the superheated process waste steam.

7. (Amended) The evaporation system as claimed in ~~any of claims~~claim 1 to 6, ~~characterized in that~~wherein the compression stage ~~(67)~~ is in the form of a mechanical vapor compression stage.

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